

REMARKS

The present application is a continuation of parent application U.S. Patent Application Number 08/857,595, presently abandoned.

Claims 1-36 are pending in the present application prior to entry of the foregoing amendment.

By the present amendment, claims 1, 3, 11, 14, 16, 17, 21, 23, 26, and 28 have been amended, claims 4-8, 15, 20, 22, and 29-36 have been canceled, and new claims 37-59 have been submitted for entry. Upon entry of the present amendment, claims 1-3, 9-14, 16-19, 21, 23-28, and 37-59 will be pending, with claims 1, 17, 37, 41, and 46 being independent. The claim cancellations and additions are for the purpose of presenting the number of claims that were presented when the parent application was examined for the Office Action of 12 July 1999. In addition, claims 1, 17, 37, and 41 have been amended, as compared to when they were examined in the parent application, to more clearly describe the present invention.

Applicants have amended the specification to claim priority to the parent application and to update the U.S. patent applications incorporated by reference within the application with the filed application serial numbers of those applications.

For this Preliminary Amendment, Applicants address the rejections of the claims in the parent application. Claims 1-3, 10-14, 16, 17, 21, 23, 25-28, 37-40, 46-50, 52, 54, and 57-59 were rejected under 35 U.S.C. 102(b) as being anticipated by Binns et al. (US Pat. 5,329,308). In the parent application, claims 9, 41-45, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329,308) in view of Beighe et al. (US Pat. 5,809,252). In the parent application, claims 18, 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329, 308) in view of Bigham et al. (US Pat. 5,684,799).

The Binns et al., Beighe et al., and Bigham et al. references will be discussed first, followed by a discussion of the present invention and the pending claims.

THE BINNS ET AL. REFERENCE

The Binns et al. patent describes a system, apparatus, and method for providing a local link for the transmission of video telephone signals between originating and destination locations. The subscriber television system of the Binns et al. patent includes both videophone data and entertainment data, such as television programming. The videophone data and the entertainment data are kept separate. For example, there are two portions of the RF bandwidth, the portion dedicated to video telephony and the portion that is used for "entertainment channels" received from downstream entertainment channel source 130 and is modulated by existing headend equipment and applied to existing cable system

facilities that form no part of the present Binns et al. invention (column 3, lines 45-54). While the Binns et al. patent can be part of an existing cable television system, each television system headend would be connected to a "point of presence" (POP) of a telephone inter-exchange carrier so that a connection between pairs of headends, and thus between a pair of video telephone locations, can be maintained by the carrier. The usefulness of the Binns et al. patent is described as that of being able "to connect cable subscriber locations to the telephone network" with enhancements (column 2, lines 5-6). The Binns et al. patent is dependent upon the telephone system for video telephony call routing control. The Binns et al. patent describes the ability to communicate to a selected destination cable subscriber location 105 in a video telephone call established via a switched digital telecommunications network 160 (column 3, lines 20-23). Upon receiving a signal to initiate a video telephony call and an indication of the desired destination, the processor 360 in the video enhanced services platform (VESP) 125 packages the information into an ISDN-PRI signaling message that is sent to POP 161 (column 7, lines 43-44) of the telephone system. At the POP 161, reception of the signaling information from VESP 125 triggers a query to network control point (NCP) 184 to address the routing of the call (column 8, lines 18-25). To correlate with the telephone system call routing, the Binns et al. patent repeatedly teaches using a standard 10 digit phone number as an "address" for the video telephony call (column 7, lines 46-53 and column 6, lines 25-26).

THE BEIGHE ET AL. REFERENCE

The Beighe et al. patent describes a cable modem interface and accessing the Internet through coaxial cables using a cable modem.

THE BIGHAM ET AL. REFERENCE

The Bigam et al. patent describes an ATM video distribution network with an ATM switch, loop transport interface, server, optical receiver, gateway, network controller, and radio frequency (RF) digital modulator. The ATM video distribution network has a centralized network controller for establishing the routing and prioritization within the network.

PRESENT INVENTION

The present invention is directed to a system, apparatus, and method of providing videophone signals over a cable network. The present invention includes routing that is controlled from within the cable network. The present invention simplifies routing for intra-system videophone calls by directly routing the calls within the system. The present invention can interface with external networks other

than a telephone network, such as the Internet or a direct-feed connection to an external wide area network (WAN) or local area network (LAN). In addition, the present invention can take advantage of the signaling options within a cable television system to efficiently access these other networks and to increase the transmission paths available for videophone data. With routing control within the cable television system the videophone data can be combined with other data information, such as entertainment video and audio, within multiple data streams on the same RF channel.

THE PENDING CLAIMS

Upon entry of the present amendment, claims 1-3, 9-14, 16-19, 21, 23-28, and 37-59 will be pending. In the parent application, claims 1-3, 10-14, 16, 17, 21, 23, 25-28, 37-40, 46-50, 52, 54, and 57-59 were rejected under 35 U.S.C. 102(b) as being anticipated by Binns et al. (US Pat. 5,329,308). In the parent application, claims 9, 41-45, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329,308) in view of Beighe et al. (US Pat. 5,809,252). In the parent application, claims 18, 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329, 308) in view of Bigham et al. (US Pat. 5,684,799). In the parent application, claims 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329, 308).

Independent Claim 1

Independent claim 1 is directed to a videophone system comprising a cable television system headend operative to control the routing of videophone calls within the cable television system, a plurality of subscriber terminals, a videophone unit, a camera associated with said videophone unit, and at least one display device associated with said videophone unit.

In the parent application, claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Binns et al. (US Pat. 5,329,308). The Office Action in the parent application states that the Binns et al. patent discloses bi-directional video telephony between cable television and switched telephone systems with head end 122, subscriber locations (101, 110, 115 and 105), network interface unit (NIU) 104, camera 102 and display 103 (See Fig. 1) for the claimed cable television headend; plurality of subscriber terminals; receiver and transmitter; a camera; and a display device. The Office Action stated that regarding the limitation to "transmit and receive the non-videophone data", the Binns et al. patent teaches that the digital network is arranged to route calls, which can be digitally encoded to represent audio and video information, as well as associated routing and control signals, to the appropriate destination (See column 5, lines 24-27).

Applicants respectfully submit that while the Binns et al. patent teaches the digital network is arranged to route calls, which can included video telephony associated routing and control signals, the NIU is specifically designed to use diplex filter 240 to filter out the non-videophone data such as the entertainment and other cable television system specific data. This allows the NIU to deal exclusively with video telephony associated data. Claim 1 clearly states that the subscriber terminals are adapted to identify, select, transmit, and receive both videophone data and non-videophone data. The Binns et al. patent clearly teaches the segregation of videophone data from the non-videophone data. For example, The Binns et al. patent states that there are two portions of the RF bandwidth, a portion that is dedicated to video telephony and a portion that is used for "entertainment channels" received from downstream entertainment channel source 130 and is modulated by existing headend equipment and applied to existing cable system facilities that form no part of the present Binns et al. invention (column 3, lines 45-54). Segregated video telephony data is required to allow the external routing control from the digital network of the Binns et al. patent.

In addition, Applicants respectfully submit that the digital telephone network of the Binns et al. patent is required for routing the videophone calls. The cable television system headend of the Binns et al. patent does not route the calls. Even on calls with origins and destinations within the same cable distribution system, the digital network controls the routing. The Binns et al. patent clearly states that upon receiving a signal to initiate a video phone call and an indication of the desired destination, the processor 360 in the VESP 125 packages the information into an ISDN-PRI signaling message that is sent to POP 161 of the telephone system (column 7, lines 43-44). In the Binns et al. patent, an NCP in the telephone digital network is referenced in each case, either ISDN or cable system based, to determine the routing for a videophone call. The Binns et al. patent even highlights the problem associated with having to use or verify the routing from the telephone digital network in that an ISDN to ISDN call would not proceed as normal and would have to verify or learn what type of equipment awaits at the destination location (column 6, lines 58-68) before proceeding. This telephone digital network control solves the problems that Binns et al. patent was created to solve, but it is not an effective method of routing videophone calls within a cable television system or videophone calls from a cable television system to other types of networks.

Claim 1 clearly states that the cable television system headend is operative to control the routing of videophone calls within the cable television system. The advantages of the cable television system headend routing the videophone call include the ability to route the call to other networks rather than the telephone system, other networks such as the Internet, a WAN, or a LAN. Another advantage is that the call processing of videophone calls within the cable television system is simplified and can be completed

without external processing to establish routing. In addition, this frees the videophone system from using the telephone system standard 10 digit phone number as an "address" for the videophone call (Binns et al. patent column 7, lines 46-53 and column 6, lines 25-26). Freed from telephone standard, the videophone system can use other addressing methods such as an internet protocol (IP) addressing method. Because the cited prior art does not teach, either explicitly or implicitly, a cable television system headend operative to control the routing of videophone calls within the cable television system or that the subscriber terminals are adapted to identify, select, transmit, and receive both videophone data and non-videophone data, Applicants respectfully submit that independent claim 1 is patentable over the art of record.

Dependent Claims 2-3, 9-14, and 16

Specifically regarding the rejection of dependent claim 9, in the parent application under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329,308) in view of Beighe et al. (US Pat. 5,809,252), Applicants traverse the assertion that the combination of the Binns et al. and Beighe et al. references would have been obvious to one of ordinary skill in the art at the time the invention was made. Applicants respectfully submit that while the Beighe et al. patent teaches an alternative to using telephone lines, in that the Internet can be accessed through coaxial cables using a cable modem, the Binns et al. patent is not easily adapted for this type of direct access to the Internet. The Binns et al. patent teaches controlling the video phone call routing from the telephone digital network. The cable modem provides a high speed Internet direct connection from the cable television system headend. This direct connection from the headend to the Internet would be difficult to route with a controller external to the cable television system. The Binns et al. and the Beighe et al. references do not teach, either explicitly or implicitly, any system or method for routing and control of a cable television system headend to Internet connection with the routing controlled from the telephone digital network. There is no attempt in the combined Binns et al. and Beighe et al. references to address the problems that would be associated with a telephone digital network routing a videophone call that originates within a cable television system with a destination of the Internet. For example, an IP address is typically used as the addressing method in the cable modem and Internet communications. The Binns et al. patent repeatedly teaches using the telephone standard 10 digit number addressing method (column 7, lines 46-53 and column 6, lines 25-26). The different addressing methods highlight the problems of externally attempting to control routing that is not destined for the telephone system digital network. Applicants submit that considered as a whole the suggested combination of the Binns et al. and the Beighe et al. references would not be desirable as the combination would create additional problems associated with

the external routing control of the headend to Internet connection.

In addition, dependent claims 2-3, 9-14, and 16 each add additional elements to those of independent claim 1. Because independent claim 1 has been shown to be patentable over the art of record, it is respectfully submitted that dependant claims 2-3, 9-14, and 16 are also patentable over the art of record.

Independent Claim 17

Independent claim 17 is directed to a cable television system adapted to provide transport of videophone data comprising a cable television system headend operative to control the routing of videophone calls within the cable television system, a plurality of hubs, and a plurality of nodes.

In the parent application, claim 17 was rejected under 35 U.S.C. 102(b) as being anticipated by Binns et al. (US Pat. 5,329,308). The Office Action in the parent application states that the Binns et al. patent discloses head end (122, 127), cable head end (124, 128), coaxial cable distribution network (121, 126), and a subscriber locations (101, 105, 110, 116) with camera (102, 107), conventional television (103, 106), network interface unit (104, 108) and videophone (111, 116) for the claimed head end, plurality of hubs, and plurality nodes.

Applicants respectfully submit that the headend disclosed in the Binns et al. patent is not operative to control the routing of videophone calls within the cable television system. Again, the Binns et al. patent clearly states that upon receiving a signal to initiate a video phone call and an indication of the desired destination, the processor 360 in the VESP 125 packages the information into an ISDN-PRI signaling message that is sent to POP 161 of the telephone system (column 7, lines 43-44). In the Binns et al. patent, an NCP in the telephone digital network is referenced in each case, either ISDN or cable system based, to determine the routing for a videophone call. The cable television system headend of the of the present invention in amended claim 17 clearly states that the cable television system headend is operative to control the routing of videophone calls within the cable television system.

In addition, claim 17 includes packetized data streams containing videophone data and non-videophone data. Although this was included in the parent application, this element was not addressed in the Office Action. The Binns et al. patent clearly teaches the segregation of videophone data from the entertainment data. For example, the Binns et al. patent states that the portion of the RF bandwidth that is used for "entertainment channels" received from downstream entertainment channel source 130 is modulated by existing headend equipment and applied to existing cable system facilities that form no part of the present invention (column 3, lines 49-54). The portion of the RF bandwidth that is dedicated to video telephony is demodulated and applied to a VESP (column 3, lines 45-48). This limits the

amount of information sent to the VESP and allows the VESP to perform conversion and multiplexing functions for transmission of the video telephony information to and from the telephone network. Additional equipment would be required to interface the VESP to intermingled packetized data streams. The routing of packetized data must be controlled and maintained within the cable television system for other entertainment data such as two-way interactive video-on-demand (VOD) applications. The segregation of videophone data in the Binns et al. patent is required to allow external routing control without conflicts. A cable television system with intermingled packetized data is incompatible with the external routing control for videophone information within the cable television system taught in the Binns et al. patent.

Because the cited prior art does not teach, either explicitly or implicitly, a cable television system headend operative to control the routing of videophone calls within a cable television system, Applicants respectfully submit that independent claim 17 is patentable over the art of record.

Dependent Claims 18-19, 21, and 23-28

Specifically regarding the rejection in the parent application of dependent claims 18 and 19 under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329, 308) in view of Bigham et al. (US Pat. 5,684,799), Applicants traverse the assertion that the combination of the Binns et al. and Bigham et al. references would have been obvious to one of ordinary skill in the art at the time the invention was made. Applicants respectfully submit that while the Bigham et al. patent shows elements of an ATM video distribution network, the Binns et al. patent is not easily adapted to incorporate the network control and protocols of the Bigham et al. patent. Again, the Binns et al. patent controls routing from a telephone switch and clearly states that upon receiving a signal to initiate a video phone call and an indication of the desired destination, the processor 360 in the VESP 125 packages the information into an ISDN-PRI signaling message that is sent to POP 161 of the telephone system (column 7, lines 43-44).

The Bigham et al. patent is directed to using internal network gateways to control routing within the ATM video distribution system. The Binns et al. patent repeatedly teaches the telephone system standard 10 digit phone number as an "address" for the videophone call (column 7, lines 46-53 and column 6, lines 25-26). There is no attempt in the combined Binns et al. and Bigham et al. references to address the problems that would be associated with the transition from internal control (Bigham et al.) to external telephone switch control (Binns et al.) and the transition between an ATM protocol (Bigham et al.) and the ISDN and 10 digit addressing methods (Binns et al.). The Binns et al. and the Bigham et al. references do not teach, either explicitly or implicitly, any system or method for routing and control of ATM signaling within a cable television system with the routing controlled from the ISDN, 10 digit

addressing telephone digital network. Applicants submit that considered as a whole the suggested combination of the Binns et al. and the Bigham et al. references would not be desirable as the combination would create additional problems associated with the control by an external telephone digital switch of the routing within an ATM video distribution network.

In addition, dependent claims 18-19, 21, and 23-28 each add additional elements to those of independent claim 17. Because independent claim 17 has been shown to be patentable over the art of record, it is respectfully submitted that dependant claims 18-19, 21, and 23-28 are also patentable over the art of record.

Independent Claim 37

Independent claim 37 is directed to a videophone system comprising a cable television system headend operative to control the routing of videophone calls within the cable television system, a plurality of set-top terminals, a videophone unit, a camera associated with said videophone unit, and at least one display device associated with said videophone unit.

In the parent application, claim 37 was rejected under 35 U.S.C. 102(b) as being anticipated by Binns et al. (US Pat. 5,329,308). The Office Action in the parent application states that the Binns et al. patent discloses a bi-directional video telephony between cable television and switched telephone systems with head end 122, subscriber locations (101, 110, 115 and 105), NIU 104, camera 102 and display 103 for the claimed "cable television system headend; plurality of set-top terminals; receiver and transmitter; a camera; and a display device". In addition, the Office Action states that the limitation of a "set-top terminal adapted to transmit and receive the non-videophone data" is taught by the Binns et al. patent as the digital network is arranged to route calls, which can be digitally encoded to represent audio and video information, as well as associated routing and control signals, to the appropriate destination.

Applicants respectfully submit that the headend disclosed in the Binns et al. patent is not operative to control the routing of videophone calls within the cable television system. Even on calls with origins and destinations within the same cable distribution system, the digital network controls the routing. The Binns et al. patent clearly states that upon receiving a signal to initiate a video phone call and an indication of the desired destination, the processor 360 in the VESP 125 packages the information into an ISDN-PRI signaling message that is sent to POP 161 of the telephone system (column 7, lines 43-44). In the Binns et al. patent, an NCP in the telephone digital network is referenced in each case, either ISDN or cable system based, to determine the routing for a videophone call. The Binns et al. patent even highlights the problem associated with having to use or verify the routing from the telephone digital network in that an ISDN to ISDN call would not proceed as normal and would have to verify or learn

what type of equipment awaits at the destination location (column 6, lines 58-68) before proceeding. This telephone digital network control solves the problems that Binns et al. patent was created to solve, but it is not an effective method of routing videophone calls within a cable television system or videophone calls from a cable television system to other types of networks.

Claim 37 clearly states that the cable television system headend is operative to control the routing of videophone calls within the videophone system. The advantages of the cable television system headend routing the videophone call include the ability to route the call directly to other networks such as the Internet, a WAN, or a LAN rather than through the telephone system. Another advantage is that the call processing of videophone calls within the videophone system is simplified and can be completed without external processing to establish routing. In addition, this frees the videophone system from using the telephone system standard 10 digit phone number as an "address" for the videophone call (Binns et al. patent column 7, lines 46-53 and column 6, lines 25-26). Freed from telephone standard, the videophone system can use other addressing methods such as an internet protocol (IP) addressing method.

In addition, Applicants respectfully submit that while the Binns et al. patent teaches the digital network is arranged to route calls, which can included video telephony associated routing and control signals, the NIU is specifically designed to use duplex filter 240 to filter out the non-videophone data such as the entertainment and other cable television system specific data. This allows the NIU to deal exclusively with video telephony associated data. Claim 37 clearly states that the set-top terminals are adapted to identify, select, transmit, and receive both videophone data and non-videophone data. The Binns et al. patent clearly teaches the segregation of videophone data from the non-videophone data. For example, The Binns et al. patent states that a portion of the RF bandwidth is dedicated to video telephony and that the portion of the RF bandwidth that is used for "entertainment channels" received from downstream entertainment channel source 130 is modulated by existing headend equipment and applied to existing cable system facilities that form no part of the present Binns et al. invention (column 3, lines 45-54). Segregated video telephony data is required to allow the external routing control from the digital network of the Binns et al. patent.

Because the cited prior art does not teach, either explicitly or implicitly, a cable television system headend operative to control the routing of videophone calls within the videophone system or that the set-top terminals are adapted to identify, select, transmit, and receive both videophone data and non-videophone data, Applicants respectfully submit that independent claim 37 is patentable over the art of record.

Dependent Claims 38-40

Dependent claims 38-40 each add additional elements to those of independent claim 37. Because independent claim 37 has been shown to be patentable over the art of record, it is respectfully submitted that dependant claims 38-40 are also patentable over the art of record.

Independent Claim 41

Independent claim 41 is directed to a videophone system within a cable television system with a headend operative to control the routing of videophone calls within the cable television system. The videophone system comprises a cable modem, a videophone unit, a camera associated with said videophone unit, and at least one display device associated with said videophone unit.

In the parent application, claim 41 was rejected under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329,308) in view of Beighe et al. (US Pat. 5,809,252). The Office Action in the parent application states that the Binns et al. patent discloses subscriber locations, NIU, camera and display corresponding to the claimed "videophone unit, camera and a display device". The Office Action states that while the Binns et al. patent fails to mention that the "videophone system is comprised of a cable modem", the Beighe et al. patent teaches an alternative to using telephone lines, the Internet can be accessed through coaxial cables using a cable modem. The Office Action states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bi-directional video telephony of the Binns et al. patent by using a cable modem as taught by the Beighe et al. patent for the carriage of two way personal computer data on a Cable TV coaxial subscriber drop. In addition, the Office Action states that the limitation of the cable modem "being adapted to transmit and receive packetized digital data over the transmission medium" is taught by Beighe et al. patent as a cable modem includes a network controller and "R/F" module. The Office Action states that the network controller of the Beighe et al. patent formats digital packets so they are compatible with the network medium that corresponds with the network controller and that the R/F module performs the necessary functions for receiving and transmitting analog data on the coaxial cable so that it is usable by the network controller.

Applicants traverse the assertion that the combination of the Binns et al. and Beighe et al. references would have been obvious to one of ordinary skill in the art at the time the invention was made. Applicants respectfully submit that while the Beighe et al. patent teaches an alternative to using telephone lines, the Binns et al. patent is not easily adapted for direct access to the Internet. The Binns et al. patent teaches controlling the videophone call routing from the telephone digital network. The cable modem provides a high speed Internet direct connection from the cable television system headend. This direct connection from the headend to the Internet would be difficult to route with a controller external to

the cable television system. The Binns et al. and the Beighe et al. references do not teach, either explicitly or implicitly, any system or method for routing and control of a cable television system headend to Internet connection with the routing controlled from the telephone digital network. There is no attempt in the combined Binns et al. and Beighe et al. references to address the problems that would be associated with a telephone digital network routing a videophone call that originates within a cable television system with a destination of the Internet. For example, an IP address is typically used as the addressing method in the cable modem and Internet communications. The Binns et al. patent repeatedly teaches using the telephone standard 10 digit number addressing method (column 7, lines 46-53 and column 6, lines 25-26). The different addressing methods highlight the problems of externally attempting to control routing that is not destined for the telephone system digital network. Applicants submit that considered as a whole the suggested combination of the Binns et al. and the Beighe et al. references would not be desirable as the combination would create additional problems associated with the external routing control of the headend to Internet connection.

In addition, Applicants respectfully submit that while the Binns et al. patent teaches the digital network is arranged to route calls, which can include video telephony associated routing and control signals, the NIU is specifically designed to use duplex filter 240 to filter out the non-videophone data such as the entertainment and other cable television system specific data. This allows the NIU to deal exclusively with video telephony associated data. Claim 41 clearly states that the cable modem is adapted to identify, select, transmit, and receive both videophone data and non-videophone data. The Binns et al. patent clearly teaches the segregation of videophone data from the non-videophone data. For example, The Binns et al. patent states that there are two portions of the RF bandwidth, a portion that is dedicated to video telephony and a portion that is used for "entertainment channels" received from downstream entertainment channel source 130 and is modulated by existing headend equipment and applied to existing cable system facilities that form no part of the present Binns et al. invention (column 3, lines 45-54). Segregated video telephony data is required to allow the external routing control from the digital network of the Binns et al. patent.

Because the cited prior art does not teach, either explicitly or implicitly, a cable modem connected to a headend operative to control the routing of videophone calls within the videophone system and adapted to identify, select, transmit, and receive both videophone data and non-videophone data, Applicants respectfully submit that independent claim 41 is patentable over the art of record.

Dependent Claims 42-45

Dependent claims 42-45 each add additional elements to those of independent claim 41.

Because independent claim 41 has been shown to be patentable over the art of record, it is respectfully submitted that dependant claims 42-45 are also patentable over the art of record.

Independent Claim 46

Independent claim 46 is directed to a method for transporting videophone data within a packetized cable television signal over a cable television system.

In the parent application, claim 46 was rejected under 35 U.S.C. 102(b) as being anticipated by Binns et al. (US Pat. 5,329,308). The Office Action in the parent application states that the claimed receiving, processing and routing; receiving in the headend incoming videophone data from the second videophone unit; and packetizing and transmitting of the incoming videophone data at the headend merely reads on the Binns et al. patent. The Office Action states that in the Binns et al. patent a cable headend is arranged to receive RF signals from coaxial cable via duplex filter that acts like a hybrid and separates incoming and outgoing signal streams and that the function of a cable headend is, in general, to act as signal converter and channel combiner and splitter for a coaxial bandwidth of a cable distribution network.

Applicants respectfully submit that the cable headend disclosed in the Binns et al. patent is not operative to establishing routing for videophone calls within the cable television system. Even on calls with origins and destinations within the same cable distribution system, the telephone digital switch controls the routing. The Binns et al. patent clearly states that upon receiving a signal to initiate a video phone call and an indication of the desired destination, the processor 360 in the VESP 125 packages the information into an ISDN-PRI signaling message that is sent to POP 161 of the telephone system (column 7, lines 43-44). New claim 46 clearly states that the headend is receiving, processing and routing the cable television signal.

Because the cited prior art does not teach, either explicitly or implicitly, the receiving, processing, and routing said cable television signal at the cable headend, Applicants respectfully submit that independent claim 41 is patentable over the art of record

Dependent Claims 47-59

Specifically regarding the rejection in the parent application of dependent claim 56 under 35 U.S.C. 103(a) as being unpatentable over Binns et al. (US Pat. 5,329, 308), Applicants traverse the assertion that within a Binns et al. patent related headend the claimed prioritizing based on a type of videophone service and the bandwidth of the cable television signal would have been obvious to one of

ordinary skill in the art at the time the invention was made. Applicants respectfully submit that the only prioritizing in the headend of a Binns et al. patent related system is to filter and separate the received signal so that only the portion of RF bandwidth that is dedicated video telephony is demodulated and applied to a VESP. The video telephony data must be segregated in a Binns et al. patent related headend to allow the establishment of routing from the telephone digital switch without conflicting with other routing within the cable system. The Binns et al. patent states that a portion of the RF bandwidth is dedicated to video telephony and that a portion of the RF bandwidth that is used for "entertainment channels" is modulated by existing headend equipment and applied to existing cable system facilities that form no part of the present Binns et al. invention (column 3, lines 45-54). With segregated data, the video telephony data bandwidth can not be expanded and prioritized to take advantage of lesser demands from other applications within a cable television system. Any prioritizing within a Binns et al. related system would be only within the dedicated video telephony portion of the bandwidth, controlled by the telephone digital switch, and not based on the bandwidth of the cable television system. The routing control within the headend of the present invention allows for the co-mingling of data to take the advantage of prioritizing the packetized data streams. Claim 56 clearly states the prioritizing in the headend and that the prioritizing is done based on the bandwidth of the cable television system.

In addition, dependent claims 47-59 each add additional elements to those of independent claim 46. Because independent claim 46 has been shown to be patentable over the art of record, it is respectfully submitted that dependant claims 47-59 are also patentable over the art of record.

CONCLUSION

By the instant response, Applicants have amended claims 1, 3, 11, 14, 16, 17, 21, 23, 26, and 28, added new claims 37-59, and canceled claims 4-8, 15, 20, 22, and 29-36. Based upon the amendments set forth herein, Applicants respectfully submit that the subject patent application is now in condition for allowance. Because the claims may include additional elements that are not taught or suggested by the cited art, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability

Upon entry of the foregoing Amendment, the above-identified patent application will include 43 claims, five of which are independent. Because Applicants have previously paid for three independent claims and 36 total claims, Applicants submit that an additional fee of \$282.00 is due for the addition of two independent claims and seven total claims and authorize the Commissioner to charge said fee to deposit account #19-0761. Should it be determined that any additional fee is due or any excess fee has

been received, the Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to deposit account #19-0761.

Should the Examiner have any comments or suggestions that would place the subject patent application in better condition for allowance, he is respectfully requested to telephone the undersigned attorney at the below-listed number.

SEND CORRESPONDENCE TO:

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Intellectual Property Department
One Technology Parkway, South
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Respectfully submitted:

By:


JOHN ERIC WEST

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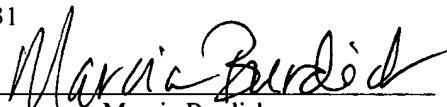
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Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Washington, DC 20231

on JUNE 9, 2000


Marcia Burdick